

INTERSESSIONAL MEETING OF THE
WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS
12th session
Agenda item 3

ISWG-GHG 12/INF.2
16 February 2022
ENGLISH ONLY
Pre-session public release:

**CONSIDERATION OF CONCRETE PROPOSALS FOR MID- AND LONG-TERM
MEASURES AND ASSOCIATED IMPACT ASSESSMENTS IN THE CONTEXT OF
PHASE I OF THE WORK PLAN AS WELL AS THE PROPOSAL TO ESTABLISH AN
INTERNATIONAL MARITIME RESEARCH BOARD**

Summary of the Organization's previous discussions on market-based measures

Note by the Secretariat

SUMMARY

Executive summary: This document provides a non-exhaustive summary of previous discussions on proposals for market-based measures which had taken place in the Organization to inform the Group's further consideration of proposals for mid-term GHG reduction measures in the context of Phase I of the Work plan on the development of mid-term measures

Strategic direction, if applicable: 3

Output: 3.2

Action to be taken: Paragraph 69

Related documents: MEPC 61/INF.2; MEPC 77/16 and ISWG-GHG 12/1

Background

1 MEPC 77 requested the Secretariat to provide to ISWG-GHG a summary of previous discussions on proposals for market-based measures (MBMs) which had taken place in the Organization, including the report of the work undertaken by the Expert Group on Feasibility Study and Impact Assessment of possible Market-based Measures as set out in document MEPC 61/INF.2 (MEPC 77/16, paragraph 7.49).

2 This document provides a summary of previous discussions on proposals for MBMs from MEPC 55 (October 2006) to MEPC 65 (May 2013).

Assembly resolution (A.963(23)) on IMO Policies and Practices related to the reduction of GHG emissions from ships

3 Assembly 23 (5 December 2003) adopted resolution A.963(23) on *IMO policies and practices related to the reduction of Greenhouse Gas emissions from ships* urging MEPC to identify and develop the necessary mechanisms needed to achieve limitation or reduction of GHG emissions from international shipping.

4 MEPC 54 (March 2006) noted an oral report by the Chair of the Working Group on Air Pollution, Mr. Bin Okamura (Japan), regarding the progress made in follow-up to resolution A.963(23), and noted that a written report would be submitted in the form of a report by the Chair of the Group to MEPC 55 (MEPC 54/21, paragraph 4.34). The Committee noted in particular that the Group had agreed to a "Draft Work plan to Identify and develop the mechanisms needed to achieve the limitation or reduction of GHG emissions from international shipping", which would be an annex to the report by the Chair of the Group for consideration by MEPC 55.

Work plan to identify and develop mechanisms for the reduction of CO₂ emissions from international shipping

5 MEPC 55 (October 2006) considered the written report submitted by the Chair of the Working Group (MEPC 55/4), and in particular the draft work plan with timetable as called for by resolution A.963(23).

6 Following consideration, the Committee approved the *Work plan to identify and develop the mechanisms needed to achieve the limitation or reduction of CO₂ emissions from international shipping* and timetable (MEPC 55/23 annex 9) with a view to identifying and developing the necessary mechanisms needed to achieve limitation or reduction of GHG emissions from ships (MEPC 55/23, paragraph 4.27).

7 In line with the Work plan which stated that technical, operational and market-based methods for dealing with GHG emissions should, from a technological and methodological perspective, be considered by MEPC 56 (July 2007), the Committee considered a proposal for a "CO₂ toll" and an associated international fund (MEPC 56/4/9 (Norway)). Following consideration, MEPC 56 established a correspondence group to discuss possible approaches on technical, operational and market-based measures to address GHG emissions from ships and present a report to MEPC 57, and also encouraged Member States and observers to put forward concrete and practical proposals for such measures (MEPC 56/23, paragraphs 4.54 and 4.67.12-14).

8 MEPC 57 (March-April 2008) agreed that having received 24 documents on GHG related issues (including information documents) only basic documents should be briefly introduced in plenary while the remaining documents would be forwarded for review by a Working Group on GHG Emissions from Ships to be established. The discussion in plenary was therefore aimed at agreeing to key principles and preparing instructions for the working group (MEPC 57/21 paragraph 4.64).

9 Following consideration, the Committee decided by an overwhelming majority to take the following principles as its reference for further debate on GHG emissions from international shipping and also for further reflection when the nature and form of the measures to be taken were clearer (MEPC 57/21 paragraph 4.77):

- .1 effective in contributing to the reduction of total global greenhouse gas emissions.

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- .2 binding and equally applicable to all flag States in order to avoid evasion;
 - .3 cost-effective;
 - .4 able to limit, or at least, effectively minimize competitive distortion;
 - .5 based on sustainable environmental development without penalizing global trade and growth;
 - .6 based on a goal-based approach and not prescribe specific methods;
 - .7 supportive of promoting and facilitating technical innovation and R&D in the entire shipping sector;
 - .8 accommodating to leading technologies in the field of energy efficiency; and
 - .9 practical, transparent, fraud free and easy to administer.

10 However, the principle of making any future GHG regime "binding and equally applicable to all flag States in order to avoid evasion" was challenged by a number of Member States and several proposals for amendments were made, but none agreed upon. Following the debate, MEPC 57 accepted a proposal by the Chairman to carefully reflect on the issue in the intersessional period in order to reach consensus on the fundamental principles.

11 Following the Committee's decision on principles, MEPC 57 approved the review carried out by the Working Group of the short-term and longer-term measures to reduce GHG emissions as identified in the Report of the Correspondence Group on GHG related issues (MEPC 57/4/5, paragraphs 5.2 to 6.8) (Australia and the Netherlands), which had listed and all the possible short- and longer-term measures in annex 1 to its report (MEPC 57/WP.8) with identification of the next steps required and stakeholders involved (MEPC 57/21, paragraph 4.117).

12 MEPC 57 also approved the terms of reference for the intersessional meeting of the Working Group on Greenhouse Gas Emissions from Ships (GHG-WG 1), to be held in Oslo, Norway, June 2008.

First Intersessional Meeting of the Working Group on Greenhouse Gas Emissions from Ships

13 The first Intersessional Meeting of the Working Group on Greenhouse Gas Emissions from Ships (GHG-WG 1) met in Oslo, Norway from 23 to 27 June 2008 and had been requested to further develop mechanisms with GHG reduction potential for international shipping with a view to selecting the most promising measures for consideration at MEPC 58.

14 Following consideration of the report of GHG-WG 1 (MEPC 58/4 (Secretariat)), MEPC 58 (October 2008) noted the Group's exchange of views on economic instruments, notably on a global levy on marine bunker fuel and emission trading schemes, and that GHG-WG 1 had not been in a position to further develop the proposed market-based mechanisms (MEPC 58.4, paragraph 8.1.10 and MEPC 58/23, paragraph 4.13).

15 Further to consideration of the report of GHG-WG 1, MEPC 58 considered six documents related to MBMs submitted to that session (MEPC 58, paragraph 4.38). A considerable debate followed the introduction of the documents. Following consideration,

MEPC 58 recognized that documents on the subject submitted to GHG-WG 1 and MEPC 58, relevant background documents, as well as new submissions should form the basis for further discussion at MEPC 59. It was also recognized that further submissions addressing all matters pertaining to MBMs, including their feasibility, were needed to enable the Committee to hold an in-depth discussion at MEPC 59. It was agreed to dedicate enough time to hold such an in-depth discussion at MEPC 59.

16 MEPC 58, therefore, requested delegations to provide as much information as possible to MEPC 59 with a view to facilitating a more focused debate at that session (MEPC 58/23, paragraphs 4.45- 4.48).

In-depth debate on market-based reduction measures

17 MEPC 59 (July 2009) recalled that resolution A.963(23) of December 2003 had urged the Committee to identify and develop the mechanisms needed to achieve limitation or reduction of GHG emissions from international shipping and, in doing so, to give priority to, inter alia, the evaluation of technical, operational and market-based solutions. MEPC 59 noted that technical and operational reduction measures had been under development over the past years and were well matured and ready for implementation, whereas market-based reduction measures, due to the complexity of the matter, had not been developed at the same pace. Recognizing that technical and operational measures alone would not be sufficient to satisfactorily reduce the amount of GHG emissions from international shipping and, in view of projections that world trade would continue growing, market-based mechanisms had been discussed by the Committee in line with the work plan agreed at MEPC 55.

18 The Committee also noted that a market-based reduction mechanism could serve two main purposes: the offsetting of growing ship emissions in other sectors, and the provision of incentives for the maritime industry to invest in more fuel-efficient ships and to operate ships in a more energy efficient way. In addition, proposed market-based mechanisms, such as a global contribution scheme (levy) and a global emission trading scheme for ships, could generate considerable funds, which could be used for different climate-related purposes, such as mitigation and adaptation activities in developing countries (MEPC 59/24, paragraphs 4.91-4.94).

Comments on the need and merit of a market-based measure

19 MEPC 59 considered a large number of views and contributions on the subject, and agreed by overwhelming majority that a MBM was needed as part of a comprehensive package of measures for the regulation of GHG emissions from international shipping. A few delegations recommended IMO to concentrate its work on the elaboration of technical and operational measures. The Committee agreed that any regulatory scheme on GHG emissions applied to international shipping should be developed and enacted by the Organization as the most competent relevant international body.

20 Several delegations recalled that the principle of common but differentiated responsibility needed to be carefully considered and included in any regulatory scheme applied, in order to make it comprehensive and globally applicable. Some delegations expressed the concern that MBMs would disadvantage developing countries, by increasing transportation costs, and cautioned that an extensive bureaucracy would be needed to assure compliance and prevent potential fraud.

21 MEPC 59 agreed that the in-depth discussion on the merit of the different approaches to market-based measures would not lead to conclusions at this session but be continued at the next session. The respective proposals would be further developed and refined for

consideration by MEPC 60, with a view to reaching an agreement on the issue. There was also general agreement that the topic of reduction levels for a potential MBM should be revisited at MEPC 60 (MEPC 59/24, paragraphs 4.106-4.115).

Initial assessment of the different proposals

22 MEPC 59 had an initial assessment of the different proposals on MBMs submitted to that session. In its consideration the Committee recalled the agreement made earlier during the GHG debate that a MBM should be developed by the Organization to complement the technical and operational reduction measures (MEPC 59/24, paragraphs 4.119 – 4.123).

23 In its exchange of the views on the subject MEPC 59 highlighted the following:

- .1 UNFCCC discussions should not be pre-empted by IMO, but coherence and coordination should be assured, such as on the use of funds for climate change mitigation and adaptation projects;
- .2 in particular, the new maritime MBM should build on experiences gained from mechanisms established under the UNFCCC, such as the Clean Development Mechanisms and Joint Implementation;
- .3 developments in other economic sectors, such as, e.g. aviation and the fuel producing industry, should be taken into account for the development of a MBM; and
- .4 a comprehensive package to reduce GHG emissions from international shipping was needed where market-based reduction measures would be an integral part complementing the technical and operational measures.

24 MEPC 59 noted the different approaches proposed by Member States, and the following points were highlighted:

- .1 a large number of delegations that spoke were in favour of the "International GHG Fund", as its approach seemed pragmatic and easy to administer, considering that the contributions would go directly to the Fund and not to the countries;
- .2 a number of delegations were supportive of the Maritime Emission Trading Scheme, highlighting that allowances would be bought by ships rather than countries, experiences with similar schemes in other sectors, and applicability especially to large industries;
- .3 a number of delegations were supportive of the proposal submitted by Japan, stating that the leveraged incentive scheme could provide incentives for the maritime sector to improve its energy efficiency above the International GHG Fund;
- .4 a number of delegations were supportive of the proposal submitted by the United States, stating that the proposal showed a new possible approach for MBMs for international maritime transport and welcoming its further development; and
- .5 some delegations favoured neither of the proposals but suggested discussions be deferred to, or left entirely to, the UNFCCC.

25 Following its consideration of the different proposals and the timeline for the development of a MBM, the Committee agreed that it was too early for countries to commit to one of the proposals, and agreed that continued discussion and assessment was needed at MEPC 60 on this issue (MEPC 59/24, paragraph 4.127).

The use of revenues generated by a MBM

26 With regard to the use of revenues by a MBM, MEPC 59 noted that there was a general preference for the greater part of any funds generated by a MBM under the auspices of the Organization, to be used for climate change purposes in developing countries through existing or new funding mechanisms under the UNFCCC or other international organizations (MEPC 59/24, paragraph 4.129).

New work plan for further consideration of MBMs

27 As part of the Chair's ((Mr. Andreas Chrysostomou (Cyprus)) proposals for further progress in document MEPC 59/4/9 (Chair), MEPC 59 considered the need and merit for a work plan to assist further progress on the MBMs.

28 The majority of delegations advocated that a work plan on MBMs would be useful. MEPC 59 therefore decided to continue its work on MBMs at MEPC 60, and adopted the following guidance for its further work:

- .1 encourage further exploration of the feasibility, robustness, environmental effectiveness (emission reduction levels) and administrative burden of possible MBM(s);
- .2 identify relevant environmental, economical, administrative and legal aspects of MBM(s); and
- .3 develop a process to identify all possible impacts of the proposed MBM(s) for reduction of GHG emissions from international shipping, including, but not limited to, the impacts on developing countries.

29 Following consideration, MEPC 59 agreed to the *Work plan for further consideration of market-based measures* as set out in annex 16 of document MEPC 59/24 (MEPC 59/24/Add.1) (MEPC 59/24, paragraph 134).

30 The Work plan envisaged the following process to guide the Committee's future discussions on MBMs with a view to reporting to A27 on the progress achieved (MEPC 59/24/Add.1, annex 16):

- .1 Member States, Associate Members and observer organizations should endeavour to submit further detailed outlines of possible MBMs to MEPC 60;
- .2 MEPC 60 would further consider the methodology and criteria for feasibility studies and impact assessments in relation to international shipping, giving priority to the overall impact on the maritime sectors of developing countries;
- .3 Taking into account the outcomes and conclusions of the studies mentioned in paragraph 2 above and any other contribution made, the Committee would be able, preferably by MEPC 61, to clearly indicate which MBM it wishes to evaluate further and identify the elements that could be included in such a measure; and

- .4 Based on the outcome mentioned in paragraph 3, MEPC 62 could be in a position to report progress on the issue to A27, to identify possible future steps.

Nine distinguishable MBM proposals

31 MEPC 60 (March 2010) recalled, inter alia, that in addition to identifying a considerable reduction potential, the *Second IMO GHG Study 2009* had concluded that market-based mechanisms were cost-effective policy instruments with a high environmental effectiveness, and that MEPC 59 having considered a large number of views and contributions on the subject; had agreed by majority that a market-based mechanism was needed as part of a comprehensive package of measures for the regulation of GHG emissions from international shipping.

32 MEPC 60 also recalled that MEPC 59, having made significant progress on the development of technical and operational measures, had conducted an in-depth discussion on market-based mechanisms. In its willingness to further consider this complex issue and fulfil the requests of the Assembly in resolution A.963(23), the Committee had agreed on a *Work plan for further consideration of market-based measures*, building on discussions and submissions from its last, and earlier sessions. The work plan for further consideration of MBMs stated that: "In order to carry out the work plan efficiently and effectively, the Committee agreed further that future sessions of the Committee may need to develop appropriate inclusive working arrangements" (MEPC 60/22, paragraphs 4.54 – 4.57).

33 MEPC 60 noted that it had received 20 session documents and 4 information documents, from which 9 distinguishable MBM proposals, or variants of some of the proposals, had been identified (MEPC 60/4/57, paragraph 6). Although the proposals had different levels of maturity and detail, and some appeared before the Committee for the first time, from conceptual outlines to fully matured proposals with most details developed, MEPC 60 agreed to treat all proposals equally (MEPC 60/22, paragraphs 4.58-4.59).

Methodology for feasibility studies and impact assessments

34 In accordance with paragraph 2 of the Work plan, MEPC 60 agreed that, at this session, it should focus on developing the methodology and criteria for feasibility studies and impact assessments of the proposed mechanisms, giving priority to the overall impact on the maritime sectors of developing countries, while avoiding a debate on the different proposals individually in any detail; a task that should be earmarked for MEPC 61.

35 Following consideration, MEPC 60 agreed that an expert group was the best available solution to undertake the feasibility study and impact assessment of market-based mechanisms called for by the Work plan and the Secretary-General was requested to establish the group in close consultation with the Chair.

36 MEPC 60 also agreed that it was imperative to adhere to the Work plan and that, in complying with paragraph 3 thereof, the Committee, at its next session, would be in a position to clearly indicate which market-based instrument it should evaluate further. It then agreed to take all the necessary steps to comply with that requirement. This included that any new or updated proposals, that might be submitted to future sessions, would not be subject to the same type of feasibility study and impact assessment by an expert group.

Selection of MBM proposals for review

37 In addition to the nine distinguishable MBM proposals submitted to MEPC 60 (as listed in MEPC 60/4/57, paragraph 6), the Committee agreed to also include document MEPC 60/4/10 (Bahamas) and the outcome of the impact study undertaken by Germany (MEPC 60/4/54) available to the expert group and included it in the list of proposals for review.

38 Consequently, the MBM proposals that would undergo the feasibility study and impact assessment to be undertaken by the MBM expert group were the following:

- .1 MEPC 60/4/8 (Cyprus et al.) containing a proposal to establish a global reduction target for international shipping, set by either UNFCCC or IMO; emissions above the target line would be offset largely by purchasing approved emission reduction credits; the offsetting activities would be financed by a contribution paid by ships on every tonne of bunker fuel purchased; contributions would be collected through bunker fuel suppliers or via direct payment from shipowners; the contribution rate would be adjusted at regular intervals to ensure that sufficient funds would be available to purchase project credits to achieve the agreed target line; and any additional funds remaining would be available for adaptation and mitigation activities via the UNFCCC and R&D and technical co-operation within the IMO framework;
- .2 MEPC 60/4/10 (Bahamas) not setting explicit standards or reductions to be achieved in the shipping sector or out-of-sector for GHG reductions but proposing that the imposition of any costs should be proportionate to the contribution by international shipping to global CO₂ emissions; further assuming that mandatory technical and operational measures would be implemented such as the EEDI; suggesting that the proposal would apply to all ships engaged in both domestic and international maritime transport as fuel prices impact all market segments and trades;
- .3 MEPC 60/4/12 (United States) proposing to reduce GHG emissions from international shipping via the Ship Efficiency and Credit Trading (SECT) scheme, which was designed to focus emission reduction activities just in the shipping sector; Under SECT, all ships, including those in the existing fleet, would be subject to mandatory energy efficiency standards, rather than a cap on emissions or a surcharge on fuel; as one means of complying with the standard, SECT would establish an efficiency-credit trading programme; the stringency level of these efficiency standards would be based on energy efficiency technology and methods available to ships in the fleet; these standards would become more stringent over time, as new technology and methods are introduced; similar to the EEDI, these efficiency standards would be based on a reduction from an established baseline and would establish efficiency standards for both new and existing ships; the SECT was designed to achieve relative GHG reductions, i.e. reductions in emissions per tonne mile and not to set an overall target for the sector;
- .4 MEPC 61/4/22 (Norway) containing a proposal for a global Emission Trading System (ETS) for international shipping, which would set a sector-wide cap on net emissions from international shipping and establish a trading mechanism to facilitate the necessary emission reductions, be they in-sector or out-of-sector; the use of out-of-sector credits allows for further growth of the shipping sector beyond the cap; in addition, the auction revenue would

be used to provide for adaptation and mitigation (additional emission reductions) through UNFCCC processes and R&D of clean technologies within the maritime sector; a number of allowances (Ship Emission Units) corresponding to the cap would be released into the market each year; further proposing that the units would be released via a global auctioning process; and requiring ships to surrender one Ship Emission Unit, or one recognized out-of-sector allowance or one recognized out-of-sector project credit, for each tonne of CO₂ they emit; the proposed ETS would apply to all CO₂ emissions from the use of fossil fuels by ships engaged in international trade above a certain size threshold; and indicated that limited exemptions could be provided for specific voyages to SIDS;

- .5 MEPC 60/4/26 (United Kingdom) proposing a global Emissions Trading System (ETS) for international shipping which was very similar in most respects to the global ETS proposal by Norway (MEPC 61/4/22); two aspects of the UK proposal that differed from the Norwegian ETS proposal were the method of allocating emissions allowances and the approach for setting the emissions cap; the UK proposal suggested that allowances could be allocated to national governments for auctioning; and also suggested the net emission cap would be set with a long-term declining trajectory with discrete phases (for example, five to eight years) with an initial introductory or transitional phase of one to two years;
- .6 MEPC 60/4/37 (Japan) proposing a Leveraged Incentive Scheme (LIS) to improve the energy efficiency of ships based on the International GHG Fund; the scheme was designed to target "direct" reduction of CO₂ emission primarily from the shipping sector; the concept of the Leveraged Incentive Scheme was that a part of the GHG Fund contributions, which were collected on marine bunker, would be refunded to ships meeting or exceeding agreed efficiency benchmarks and labelled as "good performance ships";
- .7 MEPC 60/4/39 (World Shipping Council) proposing a Vessel Efficiency System (VES), which would establish mandatory efficiency standards for both new and existing ships; each vessel would be judged against a requirement to improve its efficiency by X% below the average efficiency (the baseline) for the specific vessel class and size; standards would be tiered over time with increasing stringency; both new build and existing ships would be covered; new builds must meet the specified standards or they could not operate; new builds, once completed, are not defined as existing ships; the system applicable to existing ships sunsets when today's fleet turns over; existing ships could comply by improving their efficiency scores through technical modifications that have been inspected and certified by the Administration or recognized organizations (RO); existing ships failing to meet the required standard through technical modifications would be subject to a fee applied to each tonne of fuel consumed; the total fee applied (non-compliant ships only) would vary depending upon how far the vessel's efficiency (as measured by the EEDI) falls short of the applicable standard; and a more efficient ship would pay a smaller penalty than a less efficient ship that falls short of the standard by a wide margin;
- .8 MEPC 60/4/40 (Jamaica) proposing to achieve reduction in GHG emissions from ships through port State arrangements utilizing the ship traffic, energy and environment model, STEEM (PSL); in this proposed IMO global agreement, Member States would participate in levying a uniform emissions

charge on all vessels calling at their respective ports based on the amount of fuel consumed by the respective vessel on its voyage to that port (not bunker suppliers); the proposal was directly aimed at reducing maritime emissions of CO₂ without regard to design, operations, or energy source; the Port State Levy would be structured to achieve the global reduction targets for GHG and could be leveraged in a manner as proposed by Japan (MEPC 60/4/37) to reward vessels exceeding efficiency targets;

- .9 MEPC 60/4/41 (France) setting out further elements for the development of an Emissions Trading System (ETS) for international shipping containing additional detail on auction design under a shipping ETS; while in all other aspects the proposal was similar to the Norwegian proposal for an international ETS (as set out in document MEPC 61/4/22 (Norway));
- .10 MEPC 60/4/54 (Germany) commenting on document MEPC 60/4/22 (Norway) outlining detailed results of a scientific study on impact assessment of a Global Emissions Trading Scheme for International Shipping (METS) as proposed by France, Germany and Norway (MEPC 59/4/25); the Study found that an Emissions Trading Scheme (ETS) would not lead to any significant increase in product prices with a price increase of less than 1% on average; and
- .11 MEPC 60/4/55 (IUCN) proposing a Rebate Mechanism (RM) for a market-based instrument for international shipping to compensate developing countries for the financial impact of an MBM; a developing country's rebate would be calculated on the basis of their share of global costs of the MBM, using readily available data on a developing country's share of global imports by value as a proxy for that share (or another metric such as value-distance if data becomes available); the proposal indicated that, in principle, the Rebate Mechanism could be applied to any maritime MBM which generates revenue such as a levy or an ETS; and in order to evaluate the proposal, the Rebate Mechanism had been assessed integrated with an MBM.

Expert Group on Feasibility Study and Impact Assessment of possible Market-based Measures

39 After a lengthy exchange of views, MEPC 60 agreed by majority, to the terms of reference for the Expert Group on Feasibility Study and Impact Assessment of possible Market-based Measures (MBM-EG) (MEPC 60/22, paragraph 4.82 and annex 8). In accordance with the Work plan, the scope of the Expert Group was to evaluate the various proposals on possible MBMs with the aim to assessing the extent to which they could assist in reducing GHG emissions from international shipping, giving priority to the maritime sectors of developing countries, least developed countries (LDC) and small island developing States (SIDS), and to submit its conclusions to MEPC 61.

Nine assessment criteria

40 The Expert Group, giving priority to the overall impact on the maritime sectors of developing countries, was requested, for each of the identified MBM proposals, to assess:

- .1 the environmental effectiveness, e.g. the extent to which the proposed MBM is effective in contributing to the reduction of GHG emissions from international shipping;

- .2 the cost-effectiveness of the proposed MBM and its potential impact(s) on trade and sustainable development;
- .3 the proposed MBM's potential to provide incentives to technological change and innovation – and the accommodation of current emission reduction and energy efficiency technologies;
- .4 the practical feasibility of implementing the proposed MBM;
- .5 the need for technology transfer to, and capacity-building within, developing countries, in particular the LDCs and SIDS, in relation to implementation and enforcement of the proposed MBM, including the potential to mobilize climate change finance for mitigation and adaptation actions;
- .6 the MBM proposal's relation with other relevant conventions such as UNFCCC, Kyoto Protocol and WTO, as well as its compatibility with customary international law, as depicted in UNCLOS;
- .7 the potential additional administrative burden, and the legal aspects for National Administrations by implementing and enforcing the proposed MBM;
- .8 the potential additional workload, economic burden and operational impact for individual ships, the shipping industry and the maritime sector as a whole, of implementing the proposed MBM; and
- .9 the MBM's compatibility with the existing enforcement and control provisions under the IMO legal framework.

Report of the Expert Group (MBM-EG)

41 The Expert Group (MBM-EG) met on three occasions in 2010, and MEPC 61 (September-October 2010) considered the report of the Expert Group (MEPC 61/5/39 (Secretary-General) and MEPC 61/INF.2 (Secretariat)).

42 MEPC 61 (MEPC 61/24, paragraph 5.75) considered the full report of the Expert Group (MEPC 61/INF.2), and noted that:

- .1 following the methodology outlined in the terms of reference, the Expert Group, giving priority to the overall impact on the maritime sectors of developing countries, had assessed each of the submitted MBM proposals against the nine criteria adopted by MEPC 60;
- .2 the Expert Group study came at a critical time in the Organization's deliberations on how to address GHG emissions from the maritime sector. As had been noted in the *Second IMO GHG Study 2009*, international shipping contributed to 2.7% of the global emissions of CO₂ in 2007, and this contribution was expected to increase in the future due to projected growth in world trade;
- .3 the ten proposals analysed targeted GHG reductions through in-sector emission reductions from shipping or out-of-sector emissions reductions through the collection of funds to be used for mitigation activities in other sectors that would contribute towards the overall goal of reducing global GHG emissions. The MBM proposals sought to achieve similar objectives to a greater or lesser extent through differing methodologies;

- .4 the proposal from Germany (MEPC 60/4/54) had not been evaluated since it was an impact assessment and could not be reviewed against the nine criteria. It was thus treated as an information resource to assist in the assessment of other proposals;
- .5 to manage the work in the very tight timescale the group had established four task-groups: Environment; Shipping and Maritime; Administrative and Legal; and Trade and Development and Developing Countries; and
- .6 all of the proposals aimed at establishing a MBM to reduce GHG emissions and bring forward concepts with merit for achieving cost-effective reductions in GHG emissions. However, many of the issues considered by the Group were complicated by the fact that none of the proposals provided a final legal text from which to evaluate the administrative and legal criteria given by the MEPC.

43 The Committee noted the following conclusions of the Expert Group (MEPC 61/24, paragraph 5.76):

- .1 The evaluation of the proposals had been completed as requested by the Committee in accordance with the terms of reference.
- .2 The Group had reached its conclusions by consensus apart from a few instances as captured in the report.
- .3 The evaluation had been complicated by the different levels of maturity of the proposals. Proposals with a high level of maturity had generated more discussion compared to those that were less developed. The proposals lacked, to various degrees, sufficient details for the necessary evaluation of issues such as international harmonization in implementation, carbon leakage, fraud, and traffic of vessels between non-party States, among others. These issues required further policy considerations in order to be properly addressed.
- .4 The proposed measures would require further elaboration and development to enable a full assessment of all possible impacts in a comparable analysis.
- .5 All proposals addressed reduction of GHG emissions from shipping. Some of the proposals went beyond mitigation and proposed a mechanism that provided for substantial contribution to address the adverse effects of climate change.
- .6 The proposals had different ways of reducing emissions, some focused on "in-sector" reductions and others also utilized reductions in other sectors. The extent of such reductions was detailed within the individual evaluation of each proposal in the report.
- .7 Cost-effective operational and technical emission reduction measures were available to the shipping sector. However, barriers existed in the uptake of many of these measures.
- .8 The Group had considered sustainable development in a holistic way so that it became an inherent part of the assessment, rather than as an isolated criterion.

- .9 The implications of implementing the different MBM proposals for international shipping were directly related to the stringency of the proposed measures. Irrespective of this, the Group concluded that all proposals could be implemented notwithstanding the challenges associated with the introduction of new measures.
- .10 The assessment of the impacts of an increase in bunker fuel prices and freight costs showed that implementation of the proposed measures would affect some countries and products more than others. In some cases even small increases in costs could have relatively significant consequences. Indirect economic costs and benefits were not considered in the analysis. Some of the proposed measures include mechanisms aiming to provide means to mitigate negative impacts.

44 With reference to the Committee's *Work plan for further consideration of market-based measures*, MEPC 61 noted that with the outcome of the feasibility study and impact assessment undertaken by the Expert Group, it was in a better position to indicate which market-based mechanism should be evaluated further. Accordingly, the Committee exchanged views on which MBMs it should develop further or the elements that should be included in such a measure. MEPC 61, however, noted that there was no majority view on which of the proposed market-based mechanisms should be developed further, and that it, therefore, would need to consider how to advance the matter so the next session would be able to report progress to A27 as stipulated in the Work plan (MEPC 61/24, paragraphs 5.77-5.79).

45 MEPC 61 held a debate on how to progress the development of a suitable market-based mechanism for international shipping that took into account the special needs and circumstances of developing countries. The Committee considered how to advance the matter and agreed that an intersessional working group meeting (GHG-WG 3) should be held with the task to provide the Committee with clear advice as to what market-based mechanism to bring forward as a possible mandatory IMO instrument (MEPC 61/24, paragraphs 5.81- 5.84).

Third Intersessional Meeting of the Working Group on GHG Emissions from Ships

46 The third Intersessional Meeting of the Working Group on GHG Emissions from Ships (GHG-WG 3) was held from 28 March to Friday 1 April 2011 in accordance with the Terms of Reference agreed by MEPC 61 (MEPC 61/24, annex 7).

47 Due to time constraints, MEPC 62 (July 2011) could not consider MBMs and agreed to defer the consideration of the relevant documents submitted to that session, including the report of GHG-WG 3 (MEPC 62/5/1 (Secretariat)), to MEPC 63 (MEPC 62/24, paragraph 5.44).

48 MEPC 63 (March 2012) recalled that, having received and considered the report of the Expert Group on the Feasibility Study and Impact Assessment of possible MBMs, which was following MEPC 60, MEPC 61 had agreed to hold an Intersessional Meeting on MBMs (GHG-WG 3).

Report of GHG-WG 3

49 MEPC 63 considered the report of GHG-WG 3 (MEPC 62/5/1), and in approving the report in general, it noted (references are those of MEPC 62/5/1) (MEPC 63/23, paragraph 5.7):

- .1 that GHG-WG 3 completed, as far as possible, the terms of reference given to it by the Committee;
- .2 that there were two opinions as to whether a compelling need and purpose of an MBM for international shipping under IMO had been clearly demonstrated, and agreed to return to the issue in due course;
- .3 that the Intersessional Meeting placed the MBM proposals into two groups: (1) focus on in-sector and (2) in-sector and out-of-sector, based on the emission reduction mechanism used by the MBM proposals (annex 3);
- .4 the debate on the relation to relevant conventions and rules and agreed to consider the issue further, partly based on a submission by India;
- .5 the debate on strengths and weaknesses and that, for the MBM proposals identified under each group, the proponents had identified and listed strengths and weaknesses (annex 4) and that other delegations which were not proponents of MBMs identified additional weaknesses for all the MBM proposals (annex 5);
- .6 that the Intersessional Meeting acknowledged the findings and conclusions of the Expert Group's report, including its identification that there would be a need for further study of both the direct and indirect impacts on developing countries due to the introduction and non-introduction of an MBM for international shipping under IMO; and
- .7 that two documents GHG-WG 3/3/4 (Cyprus, Denmark, Marshall Islands and Nigeria) and GHG-WG 3/3 (Greece), or relevant parts thereof, should be considered further; and agreed to consider them at this session.

Renewed focus on MBMs

50 MEPC 63 noted that, with the mandatory technical and operational measures to increase energy efficiency in shipping (EEDI and SEEMP) having been adopted at MEPC 62 as a new chapter 4 of MARPOL Annex VI, it was now opportune to consider the third element of the Organization's GHG policy, as set out in A.963(23), namely the MBMs.

51 MEPC 63 further agreed that the focus at this session should be, as recommended both by the MBM-EG and by GHG-WG 3, on a more comprehensive impact assessment of the possible consequences of introducing an MBM for international shipping under IMO. The assessment should focus on possible impacts for consumers and industries in developing countries as well as the impacts on developing countries' ability to continue developing in line with their priorities for poverty eradication and sustainable development (MEPC 63/23, paragraphs 5.2 and 5.3).

Impact assessment

52 In responding to the call for further impact assessments and to facilitate further progress on development of a suitable MBM for international maritime transport, the Chair of MEPC 63 emphasized that the Committee should acknowledge that the feasibility study called for by the Work plan for further consideration of MBMs had been successfully completed by the Expert Group on Feasibility Study and Impact Assessment of Possible Market-based Measures (MBM-EG), which had concluded that all MBM proposals under review could be implemented, notwithstanding the challenges associated with the introduction of new

measures. On the other hand it was also clear, from the debates at MEPC 61 and those held during GHG-WG 3, that analyses of possible impacts of introducing an MBM for international shipping under IMO, in particular on developing countries, needed to continue, which was in line with the recommendations of the MBM-EG itself.

53 The impact assessment would involve substantial gathering of trade and other data as well as computer modelling, and would need to be undertaken by relevant consultants with appropriate multi-discipline expertise and experience. The assessment should be commissioned by the Secretary-General, based on terms of reference and criteria which should be adopted by MEPC 63. To make the exercise open and transparent, the Chairman proposed that a Steering Committee with open representation should be established to oversee the assessment and to assist the Secretariat.

54 Following its debate, MEPC 63 reached agreement by consensus on the need for a continued impact assessment and that its focus should be on possible impacts on consumers and industries in developing countries. However, due to time constraints, MEPC 63 agreed to further consider the terms of reference of the continued impact assessment at its next session (MEPC 63/23, paragraphs 5.8 – 5.18).

Consideration and possible consolidation of MBM proposals

55 MEPC 63 considered the various MBM proposals and whether they, or some of them, might be consolidated, thus making the number more manageable (MEPC 63/23, paragraph 5.21).

56 In the ensuing debate on the possibility of consolidating the various proposals (MEPC 63/23, paragraph 5.25), the Committee:

- .1 agreed that a proposal would be eliminated at this session from being further considered, only if this was agreed to by the proponent(s) of the proposal;
- .2 noted that a number of delegations supported the view expressed by Greece in its document MEPC 62/5/7, that only the GHG Fund and the ETS should be analysed further;
- .3 noted that a number of delegations felt it desirable to carry out the analysis with a reduced number of MBM proposals, but also recognized that, in so doing, vital information could be lost which could be used at a later stage when the final MBM had been advanced in its development, as the resultant MBM could be a combination of elements of different MBMs or some compromise solution rather than any of the proposals in their initial form;
- .4 noted that as the proposals are now grouped in two broad categories (maritime-sector; in-and-out-of-sector), it would be possible to assess the impacts quite accurately, while a comparative analysis may not be possible to do for all proposals, since some still lack sufficient detail;
- .5 noted that one possibility is to use annex 3 to document MEPC 62/5/1 (report of GHG-WG 3 (Secretariat)), in which the MBMs are already grouped, as the basis for deciding which MBM to analyse;
- .6 noted that a number of delegates expressed support for further development and consideration of the proposal by the Bahamas and that it should be subject to the impact assessment, as a possible alternative to an MBM or as an interim measure;

- .7 noted that some delegations opposed further consideration of MBM, stating that IMO should focus on technical and operational measures only;
- .8 noted that a large number of delegations were not ready to select a possible MBM proposal at this point in time and that legal text is not directly linked to the maturity of the proposals and should not be used as the benchmark for selection;
- .9 noted that a number of delegations expressed the view that the EEDI was developed as a regulatory tool for new ships only and that it would be inappropriate to extend its application to the existing fleet as part of an MBM, and opposed the use of EEDI as a possible design benchmark for an MBM. Other delegations expressed the view that suitable benchmarks, both for design and operation, would have to be found if a future MBM would rely on such features and in that case, the Committee would have to consider their design and application; and
- .10 agreed that all MBM proponents should be invited to refine their proposals as soon as possible, and not later than MEPC 64.

57 Following its consideration, the Committee agreed that the MBM proposals that would be subject to the impact assessment are those set out in annex 3 of MEPC 62/5/1. All proposals should be further developed and finalized in time for MEPC 64 to be part of the horizontal comparative analysis which would be one of the last modules to be undertaken (between MEPC 64 and MEPC 65). The Committee would consider further all proposals at MEPC 64 in order to determine whether they can be analysed against all criteria.

Climate finance and use of MBM revenues

58 MEPC 63 considered a number of documents submitted to MEPC 62 and MEPC 63 on climate finance and the use of MBM revenues (MEPC 63/23, paragraph 5.29). In that regard, MEPC 63 recalled that MEPC 59 had noted that there was a general preference for the greater part of any funds generated by an MBM under the auspices of IMO to be used for climate change purposes in developing countries, through existing or new funding mechanisms under the UNFCCC or other international organizations. The Committee also noted the information provided by the Secretariat (MEPC 63/5/5 (Secretariat)) on the establishment of the Green Climate Fund and UNFCCC's consideration of climate change finance where international shipping had been mentioned as a possible source, were of relevance for this debate. MEPC 63 noted further that GHG-WG 3 had considered possible use of revenues and noted several possible uses as listed in paragraph 3.19 of its report (MEPC 62/5/1) (MEPC 63/23, paragraphs 5.29 to 5.33).

59 In the ensuing debate, MEPC 63 considered the possible use of revenues from an MBM for international shipping under IMO and its relation with the wider efforts in the world community to mobilize climate finance for use in developing countries. It was, in particular, noted that (MEPC 63/23, paragraph 5.34):

- .1 divergent views were expressed on use of revenues and the relation between an IMO MBM and climate finance, with a number of delegations advocating disbursement of revenues as a way to accommodate (reconcile) both CBDR and the IMO principles, while others opposed this if applied universally to all ships and advocated an approach that would ensure no net incidence on developing countries;

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- .2 a large number of delegations expressed the view that the greater part of any MBM revenues should be used for climate finance in developing countries;
 - .3 a number of delegations expressed the view that an MBM for international shipping under IMO should not be used as a source for general climate finance in the context of the Green Climate Fund where funding should be provided by developed countries;
 - 4 if international shipping was to contribute to international climate financing, then international shipping should not be liable to "double taxation" (once through the UNFCCC and once through IMO). Moreover, international shipping should only contribute in a manner that is proportional to its share of global GHG emissions, which according to IMO's Second Greenhouse Gas Study 2009 is approximately 2.7% of global emissions;
 - .5 some delegations expressed the opinion that the Committee should take note of the ongoing work in other forums such as UNFCCC and G-20;
 - 6 a number of delegations stated that the RM is an innovative and constructive proposal that addresses the CBDR principle and should be analysed and considered further; and
 - .7 GHG-WG 3 had noted that there were several possible uses for revenues generated by a MBM for international shipping, as identified in the MBM proposals, including:
 - .1 incentivizing shipping to achieve improved energy efficiency;
 - .2 offsetting – purchase of approved emission reduction credits;
 - .3 providing a rebate to developing countries;
 - .4 financing adaptation and mitigation activities in developing countries;
 - .5 financing improvement of maritime transport infrastructure in developing countries (e.g. Africa);
 - .6 supporting R&D to improve energy efficiency of international shipping; and
 - .7 supporting the Organization's Integrated Technical Co-operation Programme (ITCP).

60 Following its discussion, MEPC 63 agreed that the debate on climate finance and possible use of MBM revenues should be considered further at its next session, and also agreed to invite Member States and observers to submit further input to the debate (MEPC 63/23, paragraph 5.37).

Relation between an MBM and the WTO Rules

61 MEPC 63 recalled that at GHG-WG 3 a representative from the WTO Secretariat had clarified that WTO could not challenge a global agreement adopted by another international organization, and that it encourages its members to pursue international standards wherever possible. The representative further noted that WTO Rules should not be used as an excuse for inaction in combating climate change

62 MEPC 63 recalled also that, following the presentation by the WTO representative, a large number of delegations had concluded that no incompatibility exists between a potential MBM for international shipping under IMO and the WTO Rules. However, a number of other delegations had noted that the presentation had to be viewed with caution as it expressed the position of the WTO Secretariat, and maintained the view that there are inconsistency issues between an MBM and the WTO Rules.

63 Following consideration, MEPC 63 agreed to continue the debate at MEPC 64 and invited further submissions and contributions (MEPC 63/23, paragraphs 5.38 – 5.41).

Further consideration and possible consolidation of MBM proposals

64 MEPC 64 (October 2012) recalled that MEPC 63 had considered the various MBM proposals and whether they, or some of them, might be consolidated, thus making the number more manageable. MEPC 64 also recalled that for this session all proposals should have been further developed.

65 In this regard, MEPC 64 considered a number of documents providing additional details, modified proposals, draft legal text and additional concerns with regard to the MBM proposals.

66 Following a proposal by the Chair, in view of time constraints for this item, and following comments by some delegations on the urgent need to finalize the draft MEPC resolution on promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships, MEPC 64 agreed to keep the documents presented in abeyance and postpone further debate on MBMs to MEPC 65 (MEPC 64/23, paragraphs 5.7 – 5.15).

67 MEPC 64 also agreed to postpone discussion of the impact assessment of the MBM proposals and the consideration of additional documents on climate finance and possible use of MBM revenues to MEPC 65. Finally, MEPC 64 also agreed that the relation between an MBM for international shipping under IMO and the WTO rules could be further considered at MEPC 65 subject to the impact assessment of the proposed MBMs (MEPC 64/23, paragraphs 5.16 – 5.24).

Suspension of the discussions on MBMs and related issues to a future session

68 In considering the order of discussion on issues under the agenda item on Reduction of GHG emissions from ships, MEPC 65 (May 2013), based on a proposal by its Chair expressing the view that there could be no further progress at this time, agreed to suspend discussions on MBMs and related issues to a future session except for the following three items which would be considered by MEPC 65 (MEPC 65/22, paragraph 5.1):

- .1 Update of the GHG emissions estimate for international shipping;
- .2 WTO-related matters; and
- .3 UNFCCC matters.

Action requested of the Working Group

69 The Group is invited to note the information set out in this document.